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EXAMINER

CELSA, BENNETT M

ART UNIT PAPER NUMBER

1639

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,537

Applicant(s)

TSAI, DAVID

Examiner

Bennett Celsa

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11 and 15-19 is/are pending in the application.
4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 11, 15, 16 and 19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the claims

Claims 11 and 15-19 are currently pending.

Claims 17 and 18 are withdrawn from consideration as being directed to a nonelected invention.

Claims 11, 15-16 and 19 are under consideration.

Election/Restriction

1. Applicant's election, with traverse, of the peptide HSFSGVASVE (seq. id. 1) of claim 15, which reads on claims 11, 15-16 and 19 in the correspondences dated 5/5/05 is acknowledged. Applicant argues that the restriction is improper since the species fit within a "generic" claim 16. This argument was considered but deemed nonpersuasive since the election of species is justified by distinctly different peptides engendering a burdensome search.

The requirement is still deemed proper and is therefore made FINAL.

1. Claims 17 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Claim Objections

2. Claims 11, 15-16 and 19 are objected to because of the following informalities:

- a. sequence identifiers must be present in the claimed invention including for the newly described claim 16 "generic" which contains 4 or more contiguous (or noncontiguous) naturally occurring L-amino acids.
- b. claim 15, line 3: "prostrate" misspelled.

Correction is required.

Sequence Rule Compliance

New claim 16 reciting a NEW peptide sequence requires its own sequence identifier.

In order to put the present application in compliance with the sequence rules applicant must:

- a. cancel claim 16 and comply with the above claim objection OR
- b. comply with the above claim objection AND provide:
 - a new computer readable form (CRF) including a new sequence identifier for the newly presented sequence of claim 16;
 - a paper copy corresponding to the CRF;
 - an assertion that there is no new matter added.

It is noted that prior to allowance, an application must be in full compliance with the Sequence Rules. Accordingly, if necessary, a Notice of Compliance requiring full sequence compliance may be necessary pending applicant's response to the Claim Objections and Sequence Rule Objections above.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11 use of the term "analog" is indefinite as to whether "analog" refers to similarities regarding "structure", "function", "conformation" or some other characteristic(s). The term "anlog" in the present context is not defined in the

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specification and the degree of function, structure, conformation or other characteristic is indefinite in view of the specification failure to provide guidance in this respect. If function is being referred to, the claim, when read in light of the specification, is unclear as to the functions and/or the degree of functions which are necessary to render a compound an analog within the claimed scope. Accordingly, one of ordinary skill in the art would not be apprised as to what compounds, as analogs infringe, and what non-analog compounds do not infringe the presently claimed invention.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 16 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (NEW MATTER REJECTION).

The amendment dated 5/5/05 adding new claims 16-19 introduced new matter by reciting a non-disclosed generic amino acid sequence His X1 Phe Ser X2 Val Ala Ser Val Glu (X1 and X2 being any amino acid) for treating colon and prostate cancer. In the newly presented generic, the term "any amino acid" would not only encompass the 20 naturally occurring alpha L-amino acids but would broadly encompass unnatural D-amino acids; other unnatural amino acids; and beta, gamma etc. amino acids which

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merely qualify as such by the presence of an amino or carboxyl separated by any number of carbon atoms. Just using the 20 natural L-amino acids, the above generic encompasses over 400 (20x20) different decapeptides all of which are asserted to treat colon and prostate cancer. Regarding, utility only in vitro cellular apoptosis data is provided for ONE compound (e.g. seq. Id. 1) in the newly presented generic. Issues regarding enablement including assumptions regarding the apoptosis of homologous peptide species to seq. Id. 1 and the correlatability of in vitro to in vivo data is discussed in the enablement rejection which is hereby incorporated by reference in its entirety.

Additionally, there is no direct specification support for the newly presented generic and asserted utility thereon nor does the disclosure of six peptides only one of which is tested (e.g. in vitro see specification page 43) evidence sufficient support for the presently claimed newly presented genus. Accordingly, to the extent the generic compounds include additional species to those disclosed in the specification and further to the extent that the new claims assert therapeutic utility for the entire decapeptide generic, the newly presented generic and corresponding intended utility constitutes impermissible new matter.

Applicant must cancel the new matter in response to this rejection.

Claim Rejections - 35 USC 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any

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person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 11, 15-16 and 19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (lack of written description).

The present claims are directed to fetuin polypeptides comprising (e.g. claims 15 and 16) or consisting of (e.g. claim 11) decapeptides for treating colon and prostate cancer of sequence:

- a. His X1 Phe Ser X2 Val Ala Ser Val Glu (X1 and X2 being any amino acid) (e.g. see claim 16) OR
- b. sequence 1 (bovine fetuin 300-309) and seq. 3-7 (human, pig, sheep, rat, mouse fetuin) and ANALOGS thereof (e.g. see claim 11).

Regarding item a. the generic phrase "any amino acid" would not only encompass the 20 naturally occurring alpha L-amino acids but would broadly encompass unnatural D-amino acids; other unnatural amino acids; and beta, gamma etc. amino acids which merely qualify as such by the presence of an amino or carboxyl group separated by any number of carbon atoms. Just using the 20 natural L-amino acids, the above generic encompasses over 400 (20x20) different decapeptides all of which are asserted to treat colon and prostate cancer and/or induce cell (in vitro/in vivo) apoptosis. The

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specification has **not established** the criticality or lack thereof of any of the ten amino acids.

Additionally, turning to item b, the scope of possible “analogs” of sequence id. 1 and 3-7 is vast due to the breadth of possible “analogs” of these decapeptides. In claim 11 use of the term “analog” is indefinite as to whether “analog” refers to similarities regarding “structure”, “function”, “conformation” or some other characteristic(s). The term “analog” in the present context is not defined in the specification and the degree of function, structure, conformation or other characteristic is indefinite in view of the specification failure to provide guidance in this respect. If function is being referred to, the claim, when read in light of the specification, is unclear as to the functions and/or the degree of functions which are necessary to render a compound an analog within the claimed scope.

The specification merely tests ONE decapeptide compound (e.g. seq. id 1) in in vitro tumor cell assays for apoptotic activity and broadly asserts (without scientific support) that the remaining sequences (e.g. seq. 3-7) would “also have valuable apoptotic activity” since these sequences have a sequence similarity (e.g. identity) of 60-90% as compared to seq. id. 1. However, ligand/receptor binding is stereospecific (e.g. conformationally sensitive).(see Rudinger, Peptide Hormones (June 1976: J Parsons editor) pages 1-6; e.g. see page 4) and accordingly, the efficacy of binding of a ligand to a receptor (e.g. enzyme/hormone etc.) to achieve physiological action is determined by the conformation of the ligand and/or its receptor. Thus the different aspects of biological activity cannot be predicted *a priori* but must be determined on a case to

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case base through experimental study. The careful design of synthetic analogues and their evaluation in biological systems which permit separate analysis of the various phases of receptor is the best way of obtaining such information. See Rudinger, Peptide Hormones, (June 1976) (J.A. Parsons, editor) 1,5-6. Although the Rudinger article is directed to peptide ligands binding hormone receptors; the sensitivity to amino acid substitution and unpredictability of receptor/ligand binding is clearly extrapolatable to ligand/receptor interactions generally.

With regard to the description requirement, Applicants' attention is directed to The Court of Appeals for the Federal Circuit which held that a written description of an invention involving a chemical genus, like a description of a chemical species, requires a precise definition, such as by structure, formula [or] chemical name, of the claimed subject matter sufficient to distinguish it from other materials. *University of California v. Eli Lilly and Co.*, 43 USPQ2d 1398, 1405 (1997), quoting *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (Fed. Cir. 1993) (bracketed material in original)[The claims at issue in *University of California v. Eli Lilly* defined the invention by function of the claimed DNA (encoding insulin)].

Additionally, it is noted that written description is legally distinct from enablement: "Although the two concepts of are entwined, they are distinct and each is evaluated under separate legal criteria. The written description requirement, a question of fact, ensures that the inventor conveys to others that he or she had possession of the claimed invention; whereas, the enablement requirement, a question of law, ensures

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that the inventor conveys to others how to make and use the claimed invention" See 1242 OG 169 (January 30, 2001) citing *University of California v. Eli Lilly & Co.*

Although directed to DNA compounds, this holding would be deemed to be applicable to any compound or a generic of compounds; which requires a representative sample of compounds and/or a showing of sufficient identifying characteristics; to demonstrate possession of the compound or generic(s). In this regard, applicant is further referred to *University of California v. Eli Lilly & Co.*, 119 F.3d 1559, 43 USPQ2d 1398 (Fed. Cir. 1997); "Guidelines for Examination of Patent Applications Under the 35 USC 112, first paragraph, "Written Description Requirement published in 1242 OG 168-178 (January 30, 2001); and *Univ. Of Rochester v G. D. Searle and Co.* 249 F. Supp. 2d 216 (W.D.N.Y. 2003) affirmed by the CAFC on February 13, 2004 (03-1304).

In the present instance, the claims use functional claim language (e.g. treat colon and prostate cancer and/or induce cellular apoptosis) while disclosing in vitro data for only one compound without a determination of critical core (e.g. specific amino acids) structure necessary to elicit a common activity. Accordingly, the specification discloses only limited practical examples that are not representative of the claimed genus of peptides or the other Markush members exclusive of seq. Id. 1; nor do the claims recited sufficient structural features which is common to members of the genus sufficient to demonstrate possession of the genus and its corresponding alleged bioactivity.

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6. Claims 11, 15, 16 and 19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabled for *in vitro* apoptosis in colon and prostate cells of the decapeptide of Seq. Id I (fetuin 300-309), the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the presently claimed scope of possible decapeptides found in claims 11 and 16.

There are many factors to consider when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any experimentation is Aundue≡. These factors include, but are not limited to:

1. The breadth of the claims.
2. The nature of the invention
3. The state of the prior art;
4. The level of one of ordinary skill
5. The level of predictability in the art;
6. The amount of direction provided by the inventor;
7. The presence or absence of working examples;
8. The quantity of experimentation necessary needed to make or use the invention based on the disclosure;

See :*In re Wands* USPQ 2d 1400 (CAFC 1988):

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(1-2) *The breadth of the claims and the nature of the invention:*

The present claims are directed to decapeptides for treating colon and prostate cancer or inducing cellular apoptosis comprising (e.g. claims 15 and 16) or consisting of (e.g. claim 11) a decapeptide of sequence:

a. His X1 Phe Ser X2 Val Ala Ser Val Glu (X1 and X2 being any amino acid) (e.g. see claim 16) OR

b. sequence 1 (bovine fetuin 300-309) and seq. 3-7 (human, pig, sheep, rat, mouse fetuin) and ANALOGS thereof (e.g. see claim 11).

Regarding the item a. generic "any amino acid" would not only encompass the 20 naturally occurring alpha L-amino acids but would broadly encompass unnatural D-amino acids; other unnatural amino acids; and beta, gamma etc. amino acids which merely qualify as such by the presence of an amino or carboxyl separated by any number of carbon atoms. Just using the 20 natural L-amino acids, the above generic encompasses over 400 (20x20) different decapeptides all of which are asserted to treat colon and prostate cancer.

Turning to item b, the scope of possible "analogs" of sequence id. 1 and 3-7 is vast due to the breadth of possible "analogs" of these decapeptides.

In claim 11 use of the term "analog" is indefinite as to whether "analog" refers to similarities regarding "structure", "function", "conformation" or some other characteristic(s). The term "analog" in the present context is not defined in the

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specification and the degree of function, structure, conformation or other characteristic is indefinite in view of the specification failure to provide guidance in this respect. If function is being referred to, the claim, when read in light of the specification, is unclear as to the functions and/or the degree of functions which are necessary to render a compound an analog within the claimed scope.

The specification merely tests ONE decapeptide compound (e.g. seq. id 1) in in vitro tumor cell assays for apoptotic activity and broadly asserts (without scientific support) that the remaining sequences (e.g. seq. 3-7) would "also have valuable apoptotic activity" since these sequences have a sequence similarity (e.g. identity) of 60-90% as compared to seq. id. 1.

(3 and 5) *The state of the prior art and the level of predictability in the art:*

Ligand/receptor binding is stereospecific (e.g. conformationally sensitive). (see Rudinger, Peptide Hormones (June 1976: J Parsons editor) pages 1-6; e.g. see page 4) and accordingly, the efficacy of binding of a ligand to a receptor (e.g. enzyme/hormone etc.) to achieve physiological action is determined by the conformation of the ligand and/or its receptor. Thus the different aspects of biological activity cannot be predicted *a priori* but must be determined on a case to case base through experimental study; including amino acid substitution studies where even conservative substitution may lead to inactivity (e.g. replacing leu with its isomer allo-Ile renders oxytocin inactive: see page 3). Accordingly, the careful design of synthetic analogues and their evaluation in biological systems which permit separate analysis of the various phases of receptor (e.g.

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hormone) action is the best way of obtaining such information. See Rudinger, Peptide Hormones, (June 1976) (J.A. Parsons, editor) 1,5-6. Although the Rudinger article is directed to peptide ligands binding hormone receptors; the conformational sensitivity and unpredictability of receptor/ligand binding is clearly extrapolatable to ligand/receptor interactions generally.

Additionally, the in vitro data provided given the unpredictability of the art would not be viewed as correlative to human utility. In vivo utility necessarily involves unpredictability with respect to physiological activity of an asserted process in humans. See discussion in Ex parte Kranz, 19 USPQ2d 1216,1218-1219 (6/90). Utility must be definite and in currently available form; (Brenner v. Manson, 383 U.S. 519, 148 USPQ 689) not merely for further investigation or research (e.g. "potentially useful"). Further, if the utility relied on is directed solely to in vivo (in vitro data) cell apoptosis in order to treat colon and prostate cancer in humans, evidence of utility, if required, must generally be clinical evidence, (Ex parte Timmis, 123 USPQ 581) although animal tests may be adequate where the art would accept these as appropriately correlated with human utility. In re Hartop et al., 50 CCPA 780, 311 F.2d 249, 135 USPQ 419; Ex parte Murphy, 134 USPQ 134. Applicant is requested to note that the CAFC stated in re Gangadharam, 13 USPQ 2d 1568,1570 (1989) referring to the decision of In re Carroll, 202 USPQ 571 (CCPA 1979), that "... simply because a drug gives positive results in vitro, it does not necessarily follow that there is a reasonable probability of success for therapeutic use of that drug in vivo. Citing In re Dow, 5 USPQ 2d at 1532 the Court recites the quotation "(t)he skepticism of an expert, expressed before these inventors prove him wrong, is entitled to fair evidentiary weight." For case law has recognized that where those skilled in the art would

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question the objective truth of the utility asserted, as where in vitro data is presented in support of a treatment for AIDS and AIDS related disease, and where such data is viewed as a “mere screening tool” to those skilled in the art, the in vitro data was held not to be sufficiently predictive of in vivo effectiveness under 35 USC 101. See Ex Parte Balzarini, 21 USPQ 2d 1892 (1991). Applicant's in vitro data like that presented in Balzarini would not be viewed by one skilled in the art as predictive of in vivo effectiveness. Applicant's evidence is not convincing to one skilled in the art, that applicant's compounds are sufficiently structurally similar to successful compounds already present in the art and that therefore, similar properties would be expected. See e.g. In re Jolles, 206 USPQ 885 (CCPA, 1980); In re Brana, 34 USPQ2d 1436 (CAFC, 1995). In conclusion, there is no evidence clearly relevant to utility in human beings, and the compound claims, with intended in vivo utility, are nonenabling. See also In re Buting, 163 U.S.P.Q. 689 (C.C.P.A. 1969).

(4) *The level of one of ordinary skill in the art:*

The level of skill would be high, most likely at the Ph.D. level.

(6-7) *The amount of direction provided by the inventor and the existence of working examples.*

In the present instance, the claims use functional claim language (e.g. induced cellular apoptosis and treat colon and prostate cancer) while disclosing in vitro apoptotic data for only one compound without a determination of critical core (e.g. specific amino acids) structure necessary to elicit a common activity. Accordingly, the specification discloses only limited examples that are not representative of the claimed genus of peptides or the other Markush members exclusive of seq. Id 1.

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(8) *The quantity of experimentation needed to make or use the invention based on the content of the disclosure:*

Accordingly, the undue breadth of possible "biologically active" L/D decapeptides; the unpredictable effects on bioactivity of subtle changes to the chemical structure and the stereospecificity necessary for receptor/ligand binding, the lack of guidance presented in the specification, the lack of representative examples for in vitro and in vivo use, necessitate the illustration of further examples demonstrating the making and use of a representative sample of decapeptide compounds which are useful to treat colon and prostate cancer and induce cellular apoptosis to provide the requisite enablement for the presently claimed invention as broadly claimed.

Additionally, the specification testing of ONE decapeptide compound (e.g. seq. id 1) in in vitro tumor cell assays for apoptotic activity and the assumption (without scientific support) that the remaining sequences (e.g. seq. 3-7) would "also have valuable apoptotic activity" since these sequences have a sequence similarity (e.g. identity) of 60-90% as compared to seq. id. 1 is doubtful in light of :

- a. unpredictability in biological activity of making amino acids substitutions;
- b. failure of the specification to establish critical and non-critical amino acids; and
- c. unpredictability regarding the extrapolatability of in vitro to in vivo data.

35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 15-16 and 19 are rejected under 35 U.S.C. 102(a,b) as being anticipated by Brown et al., Eur. J. Biochem. Vol. 205 pages 321-331 (1992) alone and if necessary further in view of the specification as evidence of inherent properties. .

The claims are directed to a "fetuin polypeptide" **comprising** . .

an amino acid sequence of His X1 Phe Ser X2 Val Ala Ser Val Glu (X1 and X2 being any amino acid) (e.g. claim 16) wherein said sequence is His Ser Phe Ser Gly Val Ala Ser Val Glu (e.g. claims 15 and 19).

The fetuin polypeptide :

a. is "for the treatment of colon and prostate cancer" (claim 16: intended use language)

or

b. "causes apoptosis in colon and prostate cancer cells" (claim 15: inherent property flowing from peptide structure)

Brown et al. disclose "fetuin polypeptide" (e.g. pig fetuin) comprising His Ser Phe Ser Gly Val Ala Ser Val Glu (e.g. see fig. 5 page 327, line 9 from bottom: amino acid number 300-309). Intended use limitations (e.g. "for the treatment of colon and prostate cancer") are not afforded patentable weight in compound/composition claims; and/or the reference peptide which is a decapeptide clearly within the scope of the presently claimed invention **MUST** inherently "cause apoptosis in colon and prostate cancer cells" (e.g. see present specification for evidence of inherency).

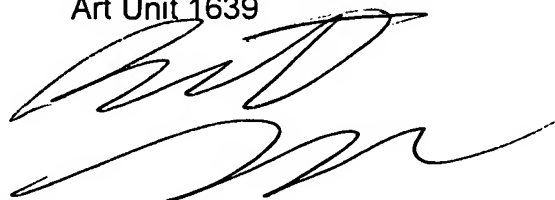
Future Correspondences

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Celsa whose telephone number is 571-272-0807. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bennett Celsa
Primary Examiner
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A handwritten signature in black ink, appearing to read 'Bennett Celsa', with a stylized flourish underneath.

BC
July 6, 2005